

Comparative Study of Reduced Opioids Administration Using IV Acetaminophen in CD implant Surgeries of Spinal Cord with Patient Controlled Analgesia (PCA)

Abstract

Background and Objective: Proper management of postoperative pain results in improved quality of patient's' life, early postoperative recovery, reduced hospitalization period and decreased treatment costs. Regarding significant efficacy and higher pain relief functions, opioids are amongst the best pain relief drugs. However, use of these narcotics as pain killers is somehow controversial. Current study investigated the effects of IV Acetaminophen in reduced use of opioids in CD implant Surgeries of Spinal Cord with PCA method.

Methods: Current double blinded clinical trial performed upon 86 patients of 20-70 years of age candidate for spinal CD implant with ASA class I or II. Patients randomly divided into two groups of IV Acetaminophen therapy (N=43) and placebo group (N=43) and each group were put equally under general anesthesia in which both received pain pump containing Fentanyl during recovery. Patients were examined regarding pain score, amount of opioid use and request for extra narcotics and the related complications including nausea, vomiting, dizziness, allergy, gastrointestinal bleeding and Ileus every 6 hours for 24 hour and the obtained results were recorded.

Results: Regarding VAS, pain was significantly lower during 24 hours of study in IV Acetaminophen group ($p < 0.05$). Mean use of opioid via pain pump was significantly lower in IV Acetaminophen group compared with placebo group ($p = 0.001$). Request for extra doses of narcotics was higher in placebo group while regarding demand for extra pain relief, there was no significant difference between both groups. Regarding other results, no significant difference observed between both study groups.

Conclusion: Results of the study indicated that use of a combination of IV Acetaminophen along with opioids would be much more effective than use of narcotics alone in postoperative pain control of CD implant surgery of spinal cord and that leads to lower pain score and decreased use of opioids and its related complications.

Keywords: CD Implant of Spinal Cord, IV Acetaminophen, Opioids, Pain Pump